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## PHONETIC RELATIONS IN SUMERIAN

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IT IS BECOMING more and more evident from a careful examination of the Sumerian vocabulary as set forth, for example, in Delitzsch's 'Sumerisches Glossar'<sup>1</sup> and previously in my *MSL*<sup>2</sup> that many phenomena which were formerly regarded as phonetic changes occurring dialectically within the language are really nothing more than the results of imperfect attempts to represent by means of Cuneiform characters a system of phonetics for which the Cuneiform signs had no real equivalents.

It will be apparent from an examination of the following table (A), of possible consonantal variants, and also the table (B), of the vocalic variation in the Cuneiform texts, that, while some of the changes may be real dialectic differentiations,<sup>3</sup> the inference is in favor of the theory that most of them were probably mere graphic differences; thus, the equations  $g-\check{g} = g-r$  (guttural  $r$ ) is a certain indication of the possible guttural character of  $g$ , as well as of the well known guttural  $\check{g}$ , while  $g-k$  (probably = nasal  $k$ ; cf.  $k-n$ ) and  $g-m$ ,  $g-n$  demonstrate that there was also in Sumerian a nasal  $ng$  represented in various ways. The feeble nasal character of the Sumerian  $m$  has long been recognized (cf. *MSL* x). That there was a cerebral  $r$ , as well as a guttural  $r$ , seems equally clear from the equation  $d-l-n-r$ , where the equation of the  $l$  appears to point to a thick  $d$ -like  $l$ , as in Russian *lob* 'forehead.' This  $n = d-l-r$  was probably not the nasal  $ng$  but plain liquid  $n$ . The equations  $n-\check{s}$ ,  $n-z$  are very curious. They are, however, paralleled in modern Chinese phonetics; thus, Peking *žen*, Hakka *nyin*, Fuchow *nöng*, Ningpo *žing* and *nying*, Wöunchow *zang*, *nang*, all = 'man'; similarly, Peking *jih*, Ningpo

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<sup>1</sup> Friedrich Delitzsch, *Sumerisches Glossar*, Leipzig, 1914, and cf. especially my paper *JAOS* 34. 321-328.

<sup>2</sup> *Materials for a Sumerian Lexicon*, Leipzig, 1908.

<sup>3</sup> For the five *eme*'s or dialects, viz., *eme-sal* (or *eme-gal*); *eme-sukudda*; *eme-suh-a*; *eme-te-na*; *eme-si-di*, see Delitzsch, *Sumerische Grammatik*, p. 21, and Prince, *AJSL* 23. 209-210; also *AJSL* 31. 71 and 28. 67-68.

*jeh* and *nyih* = 'sun' (H. A. Giles, *Chinese and English Dictionary*, Nos. 5624, 579). This Sumerian *n* which could be represented by *š* must have been a palatalized nasal, while the *š* was probably not a pure *sh*, as in English, but a palatalized *š* similar to the present pronunciation of Swedish *sj*, as in *sju* 'seven' (almost *whyu*). There is only a very slight tongue movement between a palatal nasal and a palatal sibilant (*MSL* p. xii).

The equation *r-š* is not an unusual development; for example, the final *r* in the modern Osmanli Turkish as well as in the Iranian Armenian is pronounced *rz* with a very slight sibilant ending; cf. for a marked *r* + sibilant, the complete assimilation of *r* and *z* in the Bohemian sibilant *r*, as in *rezník* 'butcher.' That *s* = *š* and *s* = *z* and conversely is not surprising, as Hebrew *š* and *z* interchange, while in the modern English dialect of Somersetshire *z* takes the place of *s* throughout. The interchange of *s*, *z* and *t* (*s-t*; *t-z*) is a well known phenomenon based upon the aspiration of *t* (*t* = *dh* = *s*), as in Ashkenazi Hebrew *sav* = *tau* (ט).

This analysis would then give the following provisional statement of some of the actual Sumerian consonants:

CEREBRALS: *r* = *d* represents a cerebral *r* as in Urdu ر.

DENTALS: *t-dh-s*; cf. Greek<sup>4</sup> αἶμα = Sumerian *itu*, 'month,' showing the intermediate between *t* and *s*; cf. Cerebrals.

GUTTURALS: *g-ğ-r* (guttural) = Arabic غ.

LABIALS: *b-p-m-w* = a medial *b* verging between *w* and a light *f*; probably similar to Spanish *b*; cf. = Sumerian *burun-marun*, Br. 10242/3 (*MSL* x); *ba* = *mu*, VR 28. 29a and especially cf. Greek Δελεφάρ = Dilbat 'the Venus-star' (Prince, Daniel, 226) and Greek μομωβοβαρ = *mulubabbar*, showing the labial pronunciation of Sumerian *b*.

LINGUALS: *l-d* = a thick *l* as in Russian and the original pro-

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<sup>4</sup>It is clear that Sumerian was read aloud probably ritually until a very late date, because we have a number of pure Sumerian words in Greek transliteration all of which are given by Leander, *Sumerische Lehnwörter*, and commented on *MSL* pp. ix-x. While it is true that these Greek transcriptions represent a late ritual pronunciation of Sumerian, there is no reason to doubt that even at this period the general phonetic tradition was correct, as Sumerian had been carefully preserved and cultivated in the temples by a numerous conservative priesthood.

nunciation of Polish barred *l*; now, however, commonly pronounced *w*; cf. Norwegian dialectic *kadla* = *kalla* 'call.'

*l-n* = probably a palatalized light *l* similar to German *l*. Persons with speech-defects sometimes pronounce *nh* in English instead of *l*, as *nhight* for 'light'; *Nhivingston* for 'Livingston,' etc. The writer has heard this unconscious change. For *l-n*, cf. Greek *λλινος* = Sumerian *Enlil*.

NASALS: *g* = nasal *k* = *m-n* = *ng*. It should be noted, however, that *k* also represented a real *k*, as Greek *Ερεσκιγαλ* = *Ereškigal* (Jensen, *KB* 6. 82; Zimmern, *KAT* 583), unless indeed the Greeks could not represent the nasal *k*, except by means of their own *k* (?). Cf. also Greek *κισσαρη* = *ki-šar* 'the lower universe' and Greek *Σεκες* = *sagaz*.

*n-d* seems to indicate a dental *n*, as in later Cornish *widn* 'one'; a common interchange.

*n-š* a nasal palatal *ngj*; see above and also Dentals.

SIBILANTS: *s-š*; note Greek *Ερεσκιγαλ* = *Ereškigal*, cited above *sub* Nasals. This is a usual Sumerian phonetic interchange and probably represented in Sumerian a palatalized *sj*, as in Swedish *sj* in *sjuk* 'sick' = *wh* (see above), which would be likely to be represented as either *s* or *š* in Cuneiform.

*s-z*; cf. Greek *Σεκες* = *sagaz*.

Our attempt to define the exact character of the Sumerian vowels is even more uncertain. Here evidently *a-e-i-u* could each stand in place of any vowel, a significant fact which leads to the conclusion that many Sumerian vowels were not reducible to the Cuneiform system. Any one of the Cuneiform vowels *a-e-i-u* might readily have been used to indicate the indeterminate vowel seen in English *but* and represented in a longer aspect by the Rumanian *â*, *î* and the Bulgarian smothered *u*. The Hebrew *Sh'va mobile* and the *e* in *before* in English represent the shorter form of this same vowel-sound which was most probably a very common Sumerian vowel. On the other hand, we may not doubt the existence of clear Sumerian vowels, because *a-a*, *e-e*, *i-i* and *u-u* all occur, evidently intended to represent *a*, *e*, *i*, *u*. We have comparatively little light on this subject except from the Semitized Sumerian loanwords and the few Greek transliterations of Sumerian words cited above, all of which show that there were clear vowels in Sumerian, as well as indeterminate vowel-sounds.

The verb-prefixes,<sup>5</sup> varying as they do vocally, are, on the other hand, a fairly sure indication of the presence of indeterminate vowels in these preformatives; thus, *ne, ni; ba, bi; mu, ma, mi; mun, man; in, an; ab, ib, ub; am, im, um* are in all probability not directive prefixes, as I formerly thought,<sup>6</sup> but merely vocalic attempts on the part of Cuneiform scribes to represent the indeterminate vowel: *nũ, bũ, mũ, ın, ũb, ım*. If this is so, the Sumerian verbal system is greatly simplified for modern scholars, as the necessity ceases for regarding these *a-i-u*-variants as having some subtle undiscovered force. The importance of a still closer phonetic study of Sumerian cannot, therefore, be overlooked, as these phonetics have the most direct bearing on the formation of the entire vocabulary.

In a previous paper,<sup>6</sup> I have pointed out the probable existence of tones in Sumerian similar to those existing in modern Chinese. While I still must adhere to this theory as one aid towards the explanation of the many meanings seen in the Sumerian vocabularies attached to apparently the same vocable, the uncertain character of Sumerian vowel-values, as well as the possibilities of variant consonantal values, indicated above, now give us a far wider range of possible sound-variation in any given vocable; thus, the syllable *ba*, for example, might have been pronounced *ba, pa, wa, fa*, so far as consonantal variation goes, and also *bũ, pũ, wũ, fũ* and even *bâ, pâ, wâ, fâ*, thus giving twelve conceivable phonetic possibilities to which different meanings might have been attached. In this way, it will be seen that the tone-theory is no longer so necessary as it seemed at first. A further study of the following tables of consonantal and vocalic possibilities will demonstrate this point more satisfactorily.

Furthermore, the interrelationship of Sumerian words and combinations should be examined much more carefully than has hitherto been done, for example, in Delitzsch's *Glossar*, where the author pays comparatively little attention to the connections between allied stems. In the following brief Comparative Glossary (C) I have given a few such comparisons of allied stems and meanings, arranged in such a way as to set forth probable phonetic interrelationships. Work of this kind should be done

<sup>5</sup> Delitzsch, *Sum. Gr.* pp. 92 ff.

<sup>6</sup> *AJSL* 31. 68.

throughout the entire Sumerian vocabulary, so far as we have it at present. Especial attention should also be directed to the existence of a number of synonymous combinations, which are in reality an extension of reduplication; thus, in the list given below: *gibîl* 'fire,' in which *gi* and *bîl* each = 'fire'; *a-za-lu-lu* = *tenešêti* 'people,' where *a* is the abstract vowel-prefix + *za* 'man' + reduplicated *lu* also = 'man.' Precisely the same phenomenon is seen in Chinese, as in *me-li*, 'beautiful,' where *me* and *li* each = 'beautiful'; *kwah-kwŭ*, 'wide' (*kwah*, 'wide' + *kwŭ* 'wide'); *shu-mu* 'tree' (*shu* 'tree' + *mu* 'tree'), etc. This peculiarity is indicative of a tendency towards bisyllabism in a primitively monosyllabic language and may be compared with the similar tendency towards trilateralism in Semitic, which, from what was probably an originally biliteral system, produced an almost uniform trilateral development.

It is very dangerous to attempt to associate Sumerian word-stems with similar vocables and meanings in modern idioms, tempting as it often may appear.<sup>7</sup> Such comparisons are based on what is probably nothing more than mere accidental resemblance and should not be regarded seriously from a philological point of view, although on the strength of such fortuitous resemblances Sumerian has been variously assigned to Semitic, Indo-Germanic, and Ugro-Altaic connections.

It is quite possible that an investigation along the lines herein indicated may force us to the conclusion that the Cuneiform system of writing could not have had a Sumerian origin, inasmuch as the Sumerian phonetics apparently differ so greatly from those of the Cuneiform signs, so far as we know their exact sound-values. It certainly seems clear that the Cuneiform characters were insufficient to indicate the Sumerian phonetics, a theory which is suggested by the many different methods of representing what is very evidently the same Sumerian word. Indeed, in many instances, it would seem as if the earlier Cuneiform scribes heard the Sumerian sounds inaccurately and

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<sup>7</sup> Note as curiosities merely; seemingly Indo-Germanic: *anšu* 'ass'; *igi* 'eye'; *uru, er* 'vir'; *kud* 'cut'; *tar* 'tear'; *dar* 'deer'; *dug* 'good'; seemingly Turkic: *ama* mother (Magyar *anya*); *sug, su* 'water'; *balag*, referred to *balalaika* 'three stringed instrument,' a Tatar word in Russian; *dur* 'dwell,' etc.

recorded them to the best of their personal ability, which record then became conventionalized and handed down as various styles (= *eme's* or 'dialects'). Any person who has had experience in working out the transcriptions of modern untrained recorders of, for example, North American Indian languages will at once see the force of such a suggestion. Ten such unskilled recorders will produce very often ten different phonetic records for the same difficult or unclear vocable.

It is as yet too early in the study of this field to decide definitely as to the origin of the Cuneiform writing, but the probabilities are, in my opinion, distinctly in favor of its non-Sumerian, possibly Semitic origin.

#### A. CONSONANTAL VARIANTS

- b-p*: *abba-apin* (Water);<sup>s</sup> *bil-pirig* (Fire). Labial.  
*g-ğ*: *ge-ğen* (Small). Guttural.  
*g-k*: *gal-kal* (Big, Woman); *gi-kin* (Place). Probably nasal (cf. *k-n*).  
*g-m*: *geš-muš* (Man); *nergal-šermal* (Big). Nasal.  
*g-n*: *gi-ni* (Man). Nasal.  
*g-r*: *sig-sir* (Fire). Guttural.  
*g-š*: *ug-uš* (Man). Probably nasal.  
*d-l-n-r*: (a) *ir-el* (Big); (b) *di-ne* (Fire); (c) *id-ir* (Water); *kud-kur* (Cut); (d) *ir-ra-du* (Go). Cerebral—lingual nasal (cf. *l-r*).  
*ğ-g* (*g-ğ*).  
*k-g* (*g-k*).  
*k-n*: *uku-unu* (Man). Nasal (cf. *g-k*).  
*l-d* (*d-l*).  
*l-r*: *bil-pirig* (Fire). Lingual (cf. Dental).  
*m-g* (*g-m*).  
*n-d* (*d-n*).  
*n-g* (*g-n*).  
*n-r*: *nun-nir* (Big). Nasal-lingual.  
*n-š*: *nergal-šermal* (Big); cf. also *nad-šad* = KUR, Br. 7387/8; *na-ša* = ŠA, Br. 7045/6 and see below *n-z*. Nasal.  
*n-z*: *na-za* (Man); see *n-š*. Nasal.

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<sup>s</sup> References to the meanings in Glossary C.

*p-b* (*b-p*).  
*r-d* (*d-r*).  
*r-g* (*g-r*).  
*r-l*: *ir-il* (Big).  
*r-š*: *ur-uš* (Man, Water); *rin-šen* (Fire). Sibilant.  
*s-š*: *sir-sir* = *šen* (Fire); *sal-šal* (Woman). Sibilant.  
*s-t*: *sar-tar* (Cut); *sir-tur* (Small). Aspiration; cf. *t-z*.  
*s-z*: *sig-sir-ser* = *zag-zi* (Fire); *ser-zer* (Small).  
*š-g* (*g-š*).  
*š-n* (*n-š*).  
*š-s* (*s-š*).  
*t-s* (*s-t*).  
*t-z*: *tur-zer* (Small). Aspiration; cf. *s-t*.  
*z-n* (*n-z*).  
*z-s* (*s-z*).  
*z-t* (*t-z*).

## B. VOWEL VARIANTS

*a-i*: *zag-sig*; *ra-ri* (Go).  
*a-e*: (Water); *sig-sen* (Fire).  
*a-u*: *ra-du* (Go).  
*e-i*: *zer-sir* (Small).  
*e-u*: *zer-zur* (Small).  
*i-a* (*a-i*).  
*i-e* (*e-i*).  
*u-a* (*a-u*).  
*u-e* (*e-u*).

In this connection, note also that *a*, *i*, *e*, *u* all interchange in expressing the idea 'Speak,' *q.v.*

## C. COMPARATIVE GLOSSARY

*Big*A. Nasal *g* and *k*-stems.

*gal* (76-77)<sup>a</sup> 'big, large,' ES *mal* (263) in *šermal* (see below);  
*kal* (113) 'firm, strong' (see Woman, B, below).

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<sup>a</sup> The references in parenthesis are to the pages of Delitzsch, *Sumerisches Glossar* (in Arabic numerals), and to the number of the stem in question, *op. cit.* (in Roman numerals).



B. Nasal *n-š*-stems.

*Nun* (207) = *rabû*; *rubû* 'big, prince'; *nin* (204) 'lady' and 'lord' (ambigen); 'great'; *nir* (202) 'very large' = *etellu* 'great one.' This *-ir*-stem may be connected with *el* 'be high' (see High), and cf. *ni-ûl* (199) = *mutellû* 'lofty one.' Note here ES *šermal* 'mighty one' = EK *nergal*.

C. *dim*-stem.

*dim* (V 139) = *rabû* 'great'; another stem (see Fire and Light).

## Cut

A. *k-g*-stems.

*kud* (I, 126) = *parâsu* 'separate, cut'; *kid* (II, 118) 'slit, split' (see Woman); *kir* (II, 119) = *gacâcu* 'cut off'; also *kirrud* (119) = *xurru* 'hole.' Probably *kur* (I, 127) 'other, to separate' belongs here. Certainly *gir* (I, 91) *paṭru* 'dagger' and *gir* (VI, 92) 'cut off clay,' together with *girin* (93) 'sherd,' must be classified in this category, as well as *gur* (XI, 110) and *guruš-sir* = *kacâcu* (110) 'cut'; *guruš-du* (111) 'cut through.' This *guruš* is not to be confused with *guruš* (111) = *edlu* 'man, lord.' Note here also *gur* (VII) 'harvest' and *ugur* (110) 'sword'; abstr. *u* + *gir*.

B. *tar*-stem.

Note that *tar* (I, 155) = *parâu*, *purururu* 'break, cut off' is a totally different stem, although a value of the same ideogram as *kud*. Perhaps *tar* = *sar* (II, 214) = *ṭaradu* 'drive away' and *šurrû* 'remove,' also *zaḡ* (222) = *šerû* 'remove.'

## Father

A. *ab*-stems.

*ab* (4) 'father'; probably = Sem. *abu*, as most scholars think, but note *pab* (72) 'father, man' and 'brother.' Is this *pab* the result of a reduplication of *ab-ab*?

B. *ad*-stems.

*ad* (8) 'father,' from quite a different stem: *ad* = *malâku* 'decide.' This *ad* is the regular word for 'father' and appears frequently in prolongation with the pronominal suffix as *ad-da-mu* 'my father.' I have suggested in the Columbia University Assyrian Seminar that *addamu* 'my father' and *ama* 'mother' suggested the Hebrew forms אִם and הוּה, since there is no

satisfactory Semitic derivation for אדם. and חיה itself may be a popular etymology from ח'יה.

### Fire and Light

A. *d-n-l*-stems (cf. B, below).

*di/e* (135) = *nabātu* 'shine,' whence *de-dal* (135) = *tiṭallum* 'flame' = 'flying (*dal*) fire' (*da*); *ne* = *ni-e* (206) = *kinūnu* 'brasier.' Possibly this *n*-stem is connected with *na* in *na-ri* (197) 'cleanse'; also *na-ri-gar* (119) and with the *l*-stems, seen in *lağ*, *lağ* (168) 'shine'; *zalağ* (222), but not with *zalağ* (222) 'blow' (?) Note also here *luğ* (174) 'wash.' Delitzsch connects *dingir* (ES *dimer*), *digir* 'god' with this *di/e*-stem = 'shining being,' but *dingir*, *dimmer* may be a combination of *dim* (V, 139) = *rabû* 'great' + the stem-element *ur*, *er* of *urum*, *erum*, *ere* (51) 'man, person.'

B. *z-s-š*-stems.

This group is undoubtedly phonetically connected with A, above.

*zag* with abstr. *a*: *a-zag* (15), the usual word for *ellu* 'bright, shining, holy.' With this must be correlated *izi* (27), the usual word for fire: abstr. *i* + *zi* (IV, 223) = *namāru* 'shine.' This *izi* 'fire' has no connection with *izi* (27) 'wall' (*igāru*), from *zi* (225) = *kānu* 'establish firmly'; *zi* (II, 223) 'enclosure,' which is quite a different root from the fire-stem *zi*. To *za(g)* fire belongs probably also *zag* (V, 220) 'honey' (*dišpu*) 'shining liquid' (thus Delitzsch); *zal* (221); *zalağ* (222) = *namāru*; cf. *in-ud-zal-la* (II, 218) 'morning'; *zalar* (219) *namru* (*r* = *ğ*).

With these *z*-stems must also be classified *sig* (IV, 242) *pure*; *sir* (II, 245) = *nūru* 'light'; *šen* (I, 264) = *ebbu*; cf. *šennu* (264) 'holy (shining) one'; 'priest of Ea.' Here also belongs *rin* (178) = *ellu*; *š* = *r*.

The words for 'heaven' *zigara*, *zigarum* (224) and *zikum* (225) possibly also *zikura* (225) 'earth,' all meaning apparently 'lofty place,' probably do not belong here, but are loan-words from Sem. *zaqaru* 'be high, lofty.'

Note that *ázag* (15) = ID-PA, the name of a disease, possibly leprosy, has no connection with *azag* 'shining, holy,' although some scholars have made this association.

*Ā* here = 'side, power' + *zag*, *sig* (II, 239) 'smite.' This *āzag*, therefore = 'destruction of power,' or 'strength' and is cognate with *esig* = DAN (36) = *dannu* 'powerful.' These terms might well have been applied to any severe illness.

C. *gibīl* and *k(g)*-stems; (*p*, *b*-stems).

It is highly probable that in *gibīl* (I, 86) = *qilūtum*, the first element *gi* is cognate with *ku* (V, 125) = *ellu* 'bright'; *kun* (I, 129) = *nawarum* 'shine'; *kur* (VII, 128) 'bake'; *gud* (215) = *ellu* also belongs here and of course *kubabbar* (125) 'silver' (both *ku* and *babbar* 'shining'). With these *k*-stems, cf. *kaš* (I, 116) = *šikaru* 'liquor'; (II, 116) = *šinatum* 'urine' (acid); also *kisi* (121), *kis* = *kaš*; III = *lāsimu* 'fiery.' All these *kaš*-stems indicate heat and, in fact, *kaš* may be cognate or a variant of *kun*, *kur*; *r* = *š* = *n* with obscured vowel.

The *bīl* in *gibīl* = *bi*, *bīl* (68) = *qalū* 'burn,' so that the word *gibīl* is probably a combination of two elements, both meaning fire, cf. *ku-babbar* cited just above. Such tautology is quite common in modern Chinese combinations (see above Introduction). With this *bi*, *bīl*, cf. also *pirig* (74) = *namrum* = *pir-ig* and *bu* (III, 69) = *napāxu* 'glow.'

### Go

A. *r-d*-stems.

*ir* (23) = *alāku* 'go'; *ra* (174) = *alāku*; *ri* (175) = *alāku*, with which are cognate the *d*-stems: *du* (141) = *alaku*; II = *našū* 'fetch, bring'; *dī* (135) and *dī-dī*. Here also belongs the usual *gin* (93) 'go' and *ge* (98) 'go, turn, bring back,' with which must be associated *gur* (I, 109) 'turn, run.' The *g* in these stems was clearly nasal *ng*. With *gin*, *ge* must be grouped *nigin* (200), *ni-ni* (204) 'go around, surround.'

Note that *ri* (II, 177) given as 'blow' by Delitzsch in the phrase: *im-ḡul-bi-ta mu-un-da-ru-uš* means simply 'go,' i. e., 'with the evil wind they go.'

B. *l*-stems.

*liḡ-laḡ* (169) 'lead' is from quite a different root.

### Hear

A. *gš-šg*-stems.

*gi/eš-tug* (97) hear; the usual expression; lit. 'have ear, hear.' The stem *šeg*, *še* (I, 262) = *šemû*, *magâru* 'hear, be favorable'

is possibly a metathesis of *gi/eš*, perhaps arising from a reduplication *giš-giš* = *šg* = *šeg*(?).

B. The stem *bur* (I, 70) also = *uznu* 'ear,' an entirely different root.

### High

#### A. *n*-stems.

*an* (12) 'high, heaven; broad' (?) (cf. II, 13; *anu* (14) 'ear of grain'; syn. *eššu* (37): *en* = *an* 'high' + *še* 'grain.' This *eššu* seems to indicate that the *-n* of *an* was nasal and hence easily assimilated; cf. *anšu* (14) 'ass,' where the apparently pure *n* does not coalesce with the *š*. Note also *en* (34) 'be high; lord'; *i* (17) = *nâdu* 'exalted' for *in* and *il* (21) = *našû* 'lift up.' In this connection should also be compared *na* (195) = *elu* high. It is not probable that *il* (21) 'high' is a loan-word from Sem. *elû* (עלוי).

#### B. *gr*-stems.

*gur* (II, 109) = *našû* 'lift up,' whence probably *gur* (III, 110) 'bend' and *gur* (V, 110) 'to measure,' and from this last *gur* (VI, 110) 'bucket, pail'; 'a measure.' Note also here *gur* (VII, 110) 'harvest' = 'lifting, gathering.'

### Little (see small)

#### Man, People

#### A. *l-n*-stems.

*lu* (171) = *nu* (206) 'man, person,' cognate with *nî* (199) 'self, person' = *ramânu*; cf. here *nî-ta(ĝ)* (201) = male and *nî-d* (202) 'slave, servant'; syn. *uš*, *q. v.*, below. Here belong also *na* (195) and *za* (218) = *amêlu* 'man' (*n* = *z*) and as a variant of *nî*, cf. *gi* (86) and *gi/eš* (I a, 95) = ES *mu*, *muš*, representing nasal *g* in these stems. Note also *gu* (105) = *ašâredu* 'leader, chief' (see B, below). It is highly likely that all these *l-n-g*-stems are connected in meaning with *nu* (II, 206) 'beget' and 'seed' (*zêru*).

Connected with *lu* is, of course, *azalulu* (15): abstr. *a* + *za* 'man' + *lu-lu*; the whole = *tenešêti* 'mankind.'

With the nasal *g*-stems must probably be associated *uk*, *uku* (42) = *nîšu* 'people.' A proof of the nasal character of the *k* in *uku* is seen in the variant *unu* (53) 'people; dwelling' (= *ungu*).

B. *uš-ur*-stems.

*uš* (58) for *muš* = *gi/eš* 'man' connected with *uš* (I, 57) 'flow, seed' in generation. This *uš* appears apparently also in *guruš* (111) = *edlum*; cf. *gur* (II, 109) 'exalt, lift up,' but is not connected with *uš* (58) = *mātu* 'death' which may be a softening to *š* of the *g* in the supposed form (*u*)*g* (42) = *mâtum*. The form *uš* 'man' is clearly cognate with *ur* (I, 47) = *amêlu*; also *urum*, *erum*, *ere* from original *öröm* (Delitzsch); *r* = *š*, *passim*.

The word *ur* (II, 47) 'dog' has evidently another derivation and must have been uttered with another tone or quantity.

It is evident that between all the *man*-stems there is a phonetic connection viz., *lu-nu-gi(ngi)-gi/eš(ngi/eš)-uš-ur*, i. e. that *l-n-g(ng)* interchange and that this consonantal preformative of the root is omitted before the words *uš-ur*. The ES forms *mu*, *muš*, whence also *me* 'man' are, of course, mere phonetic variants of *gu*, *gi/eš*, *gu*.

## Place

All *k-ng*-stems.

*ki* (116-117) = *mâtum* 'land'; *kin* (119) and the nasal *gi* (86) = *mâtum*. This *ki*-stem is the usual word and means 'place, earth, land'; cf. *kingi* 'Land of Sumer' (121); see Prince, *AJSL* 28. 67 = Heb. שָׁנַע. That the initial *k* of *ki*, *kin* was probably nasal is seen from the vocable *ni-in* (205) = *mi-im* (184), both meaning 'land,' and evidently attempts to indicate the nasal *ng*; i. e., *nin-mim* = *nging* = *kin*. This same *kin-king*-stem is seen also in *kalam* (114) = ES *kanagga* (115) (= \**kanagga*, or = \**kangang*).

## See

*igi* (18-19) = ES *ide* 'eye.' There is apparently no direct word for 'see,' which is expressed by compounding *igi* with various verbal roots, as *igi-du* 'go with eye'; *igi-tug* 'have eye'; *igi-bar* 'separate with eye' = 'distinguish'; *igi-si* 'fill eye'; also *igi-lal* 'fill eye'; *igi-dab* 'eye seize' = *dīb* (135) = *cabātu*.

## Seed

*nu* (II, 206) 'beget; seed' = *banû* and *zêru*; hence *numun* (207) = *zêru* 'seed' = *nu* 'seed' + *mun*, perhaps the same *mun* as that in *umun* 'water-hole': *u* + *mun*(?); cf. Water. Here

undoubtedly belongs *nunuz* (207), the exact meaning of which is not clear, but which appears to indicate disintegration, spoiling, fermentation; cf. *pilû ša iccuri*, perhaps 'moult,' said of a bird, and *pilû ša šikari* 'ferment,' said of wine; cf. *CT* 15. 22, obv. 1-7: *a nunuz-sa* 'alas, it is defiled' or 'spoiled,' said of a city and temple and in parallelism with *bar-mu ba-e-gá-ám* 'my dwelling is laid low.' Of course, it is possible that *nunuz-sa* in this passage may refer to offspring, a meaning which would be in association with the idea of fermentation, breeding, but *nunuz*, as Delitzsch points out (208), is primarily a color-word of a meaning similar to *sāmu* 'dark colored.'

It is probable that *nunuz* is connected with *nu* = *numun* 'seed' above and also with *nun* (207) = *qalāpu* 'peel' (not cognate with *nun* 'great,' *q. v.*, but with *nu* 'seed'); *nun* = *nu-nu* 'to seed off, peel off.' *Nunuz* itself may be a combination of this *nun* 'peel' + *uzu* 'skin, rind' = 'the peeling off of the skin' or 'rind' and hence, 'spoil, ferment.' *Nunuz* also = 'sour milk' in *CT* 15. 10, obv. 12 (*ga nunuz-ám*).

### Small

#### A. *t-s-z*-stems.

*tur* (162) 'little, young, weak;' *tura* (163) 'sickness, weakness.' Hence *sur* (II, 251); *sir* (III, 246) = *unnušu*; *zer* in *ġenzer*, *q. v.*

#### B. *ge*, *ġen*-stems.

*ge*, *ġen* (102) 'little'; *ġenzer* (214) 'little, small'; this *zer* = *zur*, *sir*, *tur* in A above. Cf. here also *gan* in *gan-buru-da* (17) 'hole' = 'little aperture'; *bur* (71) = *pašāru* 'explain, disintegrate'; cf. *bar* (64) = *pašāru* 'separate.' The *ge*, *gen*-stem appears also in *geme* 'woman'; *ge* + *eme* 'little female'; see Woman.

C. *banda* (67) = *šerru*, *cixru* 'little.' This is quite a different *banda* from *banda*, I and III, respectively = *takširu* possibly 'support,' and *tašimtu* 'sense, prudence.' Perhaps *giš-pan* (74) = *kaštum* 'bow' (weapon) is connected with *banda*, I = *takširu*.

### Speak

#### A. Vowel roots.

These are evidently apocopated forms of B, *q. v.* below.

*a* (2) 'Oh' (interjection); *i-i* (17) 'lament'; *i-nim* 'lamentation,' *passim*; *e* (29) = *qabû* 'speak, cry out'; *u, ua, ue, uai* (40) 'cry of woe.'

B. *m*-stems corresponding to A above.

*ma* (179) 'call'; *me* (I, 184) = *qûlu* 'voice'; 'to call,' whence also *eme* (34) 'tongue, language,' *passim*: abstr. *e* + *me* 'tongue, speech'; *mu* (I, 187) 'name': 'the thing called'; *mu* (VIII, 187) 'sing, call.'

It will be observed that the *m*-stems correspond exactly to the vowel stems in A, indicating the ellipsis of the weak initial *m* (*w*).

### Water

A. Vowel stems, *b(p)* and *r-d-š*.

*a* (5) 'water,' probably shortened form of *ab* (5) 'sea,' as in *a-ab-ba*: *a* + *aba*; *abzu* (5) 'ocean, abyss' (see B, below).

*e* (I, 29) = *iku* 'water-course'; note *ega* = *a-ge-a* perhaps 'black water' (Delitzsch), whence probably the *-k-* of Sem. loan-word *iku*, from *ega*(?). The Sem. form is *iku* and not *ikû* (*iqu*), with Delitzsch.

*i, id*; *id(i)* 'river'; cf. *id, id-i* (273), from the idea 'flow'; *ir, er* (24) 'weep'; *i* + *r* 'going (*r*) of water' (*i*). Here *r* and *d* and *r* and *š* seem to interchange. Note that *u* 'water' seems to appear in *umun* (52) 'water-hole'(?). *uš* (II, 57) 'flow' must belong here, as *r* and *š* may interchange.

Note that the *b(p)* -stem for 'water' also appears in *apin* (5) = *narṭabu* 'water-vessel.' This is not *a* + *pin* (Delitzsch), but more probably *ap*(= *ab*) 'water' + formative *-in* (D. Gr. § 196). With this compare also *pa* (V, 71) 'canal': *pa-ap-ab-abba*.

B. *su(zu)*-stems.

*sun, su* (II, 250) 'sprinkle; sink under water'; *sun* (253) = *narṭabu* 'water-vessel'; *sug* (248) 'pool, marsh'; cf. *sur* (VII, 252) = *birâtum* 'well, pit.'

It should be observed that the *zu* in *abzu* and *arazu* (10) 'weeping' is probably the *zu-su*-element, seen in the above stems, which undoubtedly connote 'water.' It is possible that *sud, sun, sug, sur* above are all variants of the same consonantal ending, i. e., *r-r-š*, in the one case, and *n*-nasal in the case of *sun*. It has already been noted that *n* and *š* may interchange. If this is so,

*su* and *ir*, *er*, *uš* (under A, above) may be an instance of metathesis.

### Woman

#### A. *m*-stems.

*ama* (11) 'mother, womb,' whence probably *am* (11) = *maš-taku* 'chamber, extensive space'; *geme* (191) 'woman'; *ge* 'little' (see Small) + *eme* (34) 'pregnant woman'; also = *atânu* 'she-ass,' i. e., any female; *me* (185) 'mother'; *um* (11) 'mother'; this seems like a Semitic vowel on the analogy of Sem. *ummu* 'mother,' but it is probably only another vocalic *u*-variant. Note that no *ma*-form has been found as yet.

#### B. *kel*-stem.

The Sumerian word for 'girl' is *kêl* (*ki-el*) = Sem. *amtu* 'maid, maiden,' which Delitzsch renders as *ašru(ki) ellu (el)* 'pure place,' but this seems too fanciful. It is much more likely that *kêl* is a physical allusion to the *pudendum muliebre* and is cognate with *kid* (II, 118) 'slit' and also with *kal* (279) = *batultu* 'virgin,' which *kal* clearly = *gal* (III, 78) = *pitû* 'open.' This *gal-kal* is probably really *gal* = *rabû* 'large' (see Big) which may be connected with the idea 'cut apart'; hence 'extend, make big.'

#### C. *sal*-stem.

*sal* (233) = *uru* 'pudendum muliebre,' with which is connected *sal* (233) = *rapâšu* 'broad, wide'; cf. just above *ama* and *am*. This is probably the *sal* in *Eme-sal* 'women's speech.' Delitzsch (*Gr.* p. 21) does not believe that *sal* means 'woman,' but we find the equation *sal* = *zinništu* 'woman,' Br. 10920, that is, the sign for woman has the value *sal*, Br. 10916, and this sign also = *zinništu*. It is probable that this *sal* = *siġ* (244) = *šalâtu* 'slit, split' and is an allusion like *kel* (*ki-el*) to the *pudendum muliebre*. This same woman-sign has also the value *gal* (see above) which was chosen by Delitzsch instead of *sal* in his reading *Eme-gal* for *Eme-sal*.

I still see no reason to depart from my interpretation that *Eme-sal* means 'woman's speech,' or 'softer idiom' (*AJSL* 31. 72).

It is quite possible that *sal*, which also has the variant *ša-al*, Br. 10917, is an etymological variant of *kel* = *ki-el* = *kid* = *gal*, discussed *sub* B, just above, as the nasal *g* could interchange with *s*, *š*.